

acid (I; R = OH) are reported. The best results were found for the 3-furyl and 2-methoxy thiazol-5-yl analogs.

L35 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2000 ACS
 AN 1996:19712 HCAPLUS
 DN 124:164360
 TI Antibacterial activity of a synthetic peptide (PR-26) derived from PR-39, a proline-arginine-rich neutrophil antimicrobial peptide
 AU Shi, Jishu; Ross, Christopher R.; Chengappa, M. M.; Sylte, Matt J.; McVey, D. Scott; Blecha, Frank
 CS Dep. Anat. Physiol., Kansas State Univ., Manhattan, KS, 66506, USA
 SO Antimicrob. Agents Chemother. (1996), 40(1), 115-21
 CODEN: AMACQ; ISSN: 0066-4804
 DT Journal
 LA English
 AB PR-39 is a proline-arginine-rich (PR) neutrophil antibacterial peptide originally identified and purified from the porcine small intestine. We report on the synthesis of a functional antibacterial domain of PR-39, the first 26 amino acid residues of the NH₂ terminus. PR-26 was as potent as or more potent than PR-39 against enteric gram-neg. bacteria. This truncated form of PR-39 potentiated neutrophil phagocytosis of *Salmonella choleraesuis* and decreased the level of *S. typhimurium* invasion into intestinal epithelial cells. SEM confirmed that these peptides did not lyse cells by pore-forming mechanisms; however, they potentiated the antibacterial capabilities of a pore-forming peptide, magainin A. In addn., PR-26 was not toxic to epithelial cells at concns. several times greater than its bactericidal concn. These data suggest that PR-39 and its functional domain, PR-26, may potentiate the host's defense capabilities against gram-neg. infections. ←

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L49 ANSWER 1 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 2000:440602 BIOSIS
 DN PREV200000440602
 TI PR-39, endogenous antimicrobial peptide derived from porcine neutrophils is capable binding PI3Kp85 and inhibits cell proliferation and modifies actin bundle structure in K-ras transformed cells.
 AU Kohgo, Yutaka (1); Fujimoto, Yoshinori (1); Tanaka, Koji (1); Suzuki, Masako (1); Suzuki, Yasuaki (1); Saito, Hiroyuki (1); Otake, Takaaki (1)
 CS (1) Third Department of Internal Medicine, Asahikawa Medical College, Asahikawa, Hokkaido Japan
 SO Acta Haematologica (Basel), (July, 2000) Vol. 103, No. Supplement 1, pp. 30. print.
 Meeting Info.: 13th Symposium on Molecular Biology of Hematopoiesis and Treatment of Leukemia and Cancer New York, NY, USA July 14-18, 2000

ISSN: 0001-5792.

DT Conference

LA English

SL English

CC Immunology and Immunochemistry - General; Methods *34502
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
 Cytology and Cytochemistry - General *02502
 Cytology and Cytochemistry - Animal *02506
 Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies *15002
 Blood, Blood-Forming Organs and Body Fluids - Blood Cell Studies *15004

BC Microorganisms - Unspecified 01000

IT Major Concepts
 Cell Biology; Immune System (Chemical Coordination and Homeostasis);
 Blood and Lymphatics (Transport and Circulation)

IT Parts, Structures, & Systems of Organisms
 neutrophil: blood and lymphatics, immune system

IT Chemicals & Biochemicals
PR-39: endogenous antimicrobial peptide

IT Miscellaneous Descriptors
 innate immunity; **Meeting Abstract**

ORGN Super Taxa
 Microorganisms; Suidae: Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
 microbe (Microorganisms); porcine (Suidae)

ORGN Organism Superterms
 Animals; Artiodactyls; Chordates; Mammals; Microorganisms; Nonhuman Mammals; Nonhuman Vertebrates; Vertebrates

RN 52622-12-5Q (**PR-39**)
139637-11-9Q (PR-39)

L49 ANSWER 2 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 2000:300808 BIOSIS

DN PREV200000300808

TI Inhibition of NAD(P)H oxidase by diphenylene iodonium and **PR-39** did not prevent glomus cell calcium and chemoreceptor responses in rat carotid body.

AU Roy, A. (1); Mokashi, A. (1); Rozanov, C. (1); Daudu, P. (1); Ross, C.; Lahiri, S. (1)

CS (1) Department of Physiology, University of Pennsylvania School of Medicine, Philadelphia, PA, 19104-6085 USA

SO FASEB Journal, (March 15, 2000) Vol. 14, No. 4, pp. A393. print.
 Meeting Info.: **Annual Meeting of Professional Research Scientists: Experimental Biology 2000** San Diego, California, USA April 15-18, 2000 Federation of American Societies for Experimental Biology
 ISSN: 0892-6638.

DT Conference

LA English

SL English

CC Nervous System - General; Methods *20501
 Cytology and Cytochemistry - Animal *02506
 Biophysics - General Biophysical Studies *10502
 Enzymes - General and Comparative Studies; Coenzymes *10802
 Cardiovascular System - General; Methods *14501
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520

IT Major Concepts
 Biochemistry and Molecular Biophysics; Nervous System (Neural Coordination)

IT Parts, Structures, & Systems of Organisms
 carotid body: circulatory system, nervous system; carotid sinus nerve: nervous system; glomus cell: nervous system

IT Chemicals & Biochemicals
 NADPH oxidase; **PR-39**; chemoreceptor; diphenylene

iodonium; reactive oxygen species: production
 IT Miscellaneous Descriptors
Meeting Abstract
 ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 rat (Muridae)
 ORGN Organism Superterms
 Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates;
 Rodents; Vertebrates
 RN 9032-22-8Q (NADPH OXIDASE)
 37256-37-4Q (NADPH OXIDASE)
 77106-92-4Q (NADPH OXIDASE)
 52622-12-5Q (**PR-39**)
139637-11-9Q (PR-39**)**
 244-54-2 (DIPHENYLENE IODONIUM)

 L49 ANSWER 3 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 2000:223066 BIOSIS
 DN PREV200000223066
 TI Sequence determinants and SH3-binding motif in **PR-39**
 cathelicidin controls antibacterial activity and binding to mammalian
 targets.
 AU Chan, Y. R. (1); Zanetti, M.; Genarro, R.; Gallo, R. L.
 CS (1) Harvard Medical School, Boston, MA USA
 SO Journal of Investigative Dermatology, (April, 2000) Vol. 114, No. 4, pp.
 757.
 Meeting Info.: **61st Annual Meeting of the Society for Investigative**
Dermatology. Chicago, Illinois, USA May 10-14, 2000
 ISSN: 0022-202X.
 DT Conference
 LA English
 SL English
 CC Chemotherapy - General; Methods; Metabolism *38502
 Genetics and Cytogenetics - Animal *03506
 Biochemical Studies - General *10060
 Biophysics - General Biophysical Studies *10502
 General Biology - Symposia, Transactions and Proceedings of
 Conferences, Congresses, Review Annuals *00520
 BC Mammalia - Unspecified 85700
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Pharmacology
 IT Chemicals & Biochemicals
 PR-39: SH-3 binding motif, antibacterial; SH-3
 peptide: binding; mRNA [messenger RNA]: induction; syndecan-4
 IT Miscellaneous Descriptors
 wound repair; **Meeting Abstract**
 ORGN Super Taxa
 Mammalia: Vertebrata, Chordata, Animalia; Muridae: Rodentia, Mammalia,
 Vertebrata, Chordata, Animalia
 ORGN Organism Name
 NIH-3T3 cell line (Muridae): fibroblast; mammal (Mammalia)
 ORGN Organism Superterms
 Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates;
 Rodents; Vertebrates
 RN 52622-12-5Q (**PR-39**)
139637-11-9Q (PR-39**)**

 L49 ANSWER 4 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 2000:24866 BIOSIS
 DN PREV20000024866
 TI Proteasome-dependent regulation of angiogenesis: A novel therapeutic
 approach.
 AU Li, Jian (1); Post, Mark (1); Gao, Youhe (1); Li, Min (1);
 Metais, Caroline (1); Aird, William (1); Sellke, Frank W. (1); Hampton,
 Thomas G. (1); Carmeliet, Peter P.; Simons, Michael

CS (1) Beth Israel Deaconess Med Ctr, Harvard Med Sch, Boston, MA USA
 SO Circulation, (Nov. 2, 1999) Vol. 110, No. 18 SUPPL., pp.
 I.475-I.476.
 Meeting Info.: 72nd Scientific Sessions of the American Heart
 Association Atlanta, Georgia, USA November 7-10, 1999
 ISSN: 0009-7322.

DT Conference
 LA English
 CC Cardiovascular System - General; Methods *14501
 Biochemical Studies - General *10060
 General Biology - Symposia, Transactions and Proceedings of
 Conferences, Congresses, Review Annuals *00520
 Endocrine System - General *17002

IT Major Concepts
 Biochemistry and Molecular Biophysics; Cardiovascular System (Transport
 and Circulation)

IT Parts, Structures, & Systems of Organisms
 heart: circulatory system

IT Chemicals & Biochemicals
 FGF-R1 [fibroblast growth factor-R1]: expression; Flt-1: expression;
 HIF-1-alpha: expression; PR39 protein: overexpression,
 therapeutic potential; VEGF [vascular endothelial growth factor]:
 expression

IT Miscellaneous Descriptors
 angiogenesis: PR39-induced, molecular basis,
 proteasome-dependent regulation; Meeting Abstract

ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
 mouse (Muridae)

ORGN Organism Superterms
 Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates;
 Rodents; Vertebrates

RN 127464-60-2 (VASCULAR ENDOTHELIAL GROWTH FACTOR)

L49 ANSWER 5 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1999:524759 BIOSIS
 DN PREV199900524759
 TI Cardiac-specific overexpression of PR-39 induces
 angiogenesis, myocardial hypertrophy, and increased microvascular
 reactivity.
 AU Li, Jian; Hampton, Thomas G.; Metais, Caroline; Ma, Lijie; Li, Jianyi;
 Amende, Ivo; Sellke, Frank W.; Douglas, Pamela S.; Morgan, James P.;
 Simons, Michael
 CS BIBMC/Harvard Med. Sch., Boston, MA USA
 SO Circulation, (Oct. 27, 1998) Vol. 98, No. 17 SUPPL., pp. I794.
 Meeting Info.: 71st Scientific Sessions of the American Heart
 Association Dallas, Texas, USA November 8-11, 1998 The American Heart
 Association
 ISSN: 0009-7322.

DT Conference
 LA English
 CC Cardiovascular System - Blood Vessel Pathology *14508
 Cardiovascular System - Physiology and Biochemistry *14504
 Cardiovascular System - Heart Pathology *14506
 Endocrine System - Neuroendocrinology *17020
 General Biology - Symposia, Transactions and Proceedings of
 Conferences, Congresses, Review Annuals *00520
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064

BC Muridae 86375
 IT Major Concepts
 Cardiovascular System (Transport and Circulation)

IT Diseases
 myocardial hypertrophy: heart disease; myocardial infarction: heart
 disease, vascular disease

IT Chemicals & Biochemicals

serotonin; **PR-39**
 IT Alternate Indexing
 Heart Hypertrophy (MeSH); Myocardial Infarction (MeSH)
 IT Miscellaneous Descriptors
 angiogenesis; **Meeting Abstract**
 ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 mouse (Muridae)
 ORGN Organism Superterms
 Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates;
 Rodents; Vertebrates
 RN 52622-12-5Q (**PR-39**)
139637-11-9Q (**PR-39**)
 50-67-9 (SEROTONIN)

 L49 ANSWER 6 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1999:227498 BIOSIS
 DN PREV199900227498
 TI Epithelial innate defense by excreted PR-rich peptides involves intracellular "short circuiting."
 AU Chan, Y. R. (1); Gallo, R. L. (1)
 CS (1) Department of Dermatology, Boston Children's Hospital and Harvard Medical School, Boston, MA USA
 SO Journal of Investigative Dermatology, (April, 1999) Vol. 112, No. 4, pp. 533.
 Meeting Info.: **60th Annual Meeting of the Society for Investigative Dermatology** Chicago, Illinois, USA May 5-9, 1999
 ISSN: 0022-202X.
 DT Conference
 LA English
 CC Cytology and Cytochemistry - Animal *02506
 Integumentary System - General; Methods *18501
 Immunology and Immunochemistry - General; Methods *34502
 General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
 BC Muridae 86375
 IT Major Concepts
 Cell Biology; Immune System (Chemical Coordination and Homeostasis);
 Integumentary System (Chemical Coordination and Homeostasis)
 IT Chemicals & Biochemicals
 PR-39: antimicrobial peptide, proline-arginine rich peptide, sort-circuiting effects, excretion
 IT Miscellaneous Descriptors
 cutaneous immunity; epithelial innate defense; intracellular signaling pathways; **Meeting Abstract**
 ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 NIH 3T3 cell line (Muridae)
 ORGN Organism Superterms
 Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates;
 Rodents; Vertebrates
 RN 52622-12-5Q (**PR-39**)
139637-11-9Q (**PR-39**)

 L49 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1999:18195 BIOSIS
 DN PREV199900018195
 TI PR39 interacts with proteasome and modulates HIF-1alpha level in ECV cells.
 AU Gao, Youhe; Volk, Ruediger; Li, Jian; Simons, Michael
 CS Angiogenesis Res. Cent., Beth Israel Deaconess Med. Cent., Harv. Med. Sch., Boston, MA USA
 SO Molecular Biology of the Cell, (Nov., 1998) Vol. 9, No. SUPPL., pp. 123A.

Meeting Info.: **38th Annual Meeting of the American Society for Cell Biology** San Francisco, California, USA December 12-16, 1998 American Society for Cell Biology
 . ISSN: 1059-1524.

DT Conference
 LA English
 CC Cytology and Cytochemistry - General *02502
 Biochemical Studies - General *10060
 Metabolism - General Metabolism; Metabolic Pathways *13002
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
 BC Hominidae 86215
 Muridae 86375
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Cell Biology
 IT Chemicals & Biochemicals
 cDNA; hypoxia inducible factor-1 alpha; **PR39**: activity, antibacterial peptide
 IT Miscellaneous Descriptors
 proteasome; **Meeting Abstract**
 ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 ECV (Hominidae): human endothelial cells; 3T3 (Muridae): mouse cells
 ORGN Organism Superterms
 Animals; Chordates; Humans; Mammals; Nonhuman Mammals; Nonhuman Vertebrates; Primates; Rodents; Vertebrates
 RN 52622-12-5Q (**PR39**)
139637-11-9Q (PR39**)**

L49 ANSWER 8 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1998:525904 BIOSIS
 DN PREV199800525904
 TI Suppression of invasive activity and alteration of actin structure caused by transfection with **PR-39** gene into human hepatoma cells.
 AU Fujimoto, Y.; Otake, T.; Tanaka, K.; Suzuki, Y.; Ikuta, K.; Saito, H.; Ohhira, M.; Ono, M.; Kohgo, Y.
 CS Third Dep. Intern. Med., Asahikawa Med. Coll., Asahikawa Japan
 SO Hepatology, (Oct., 1998) Vol. 28, No. 4 PART 2, pp. 399A.
 Meeting Info.: **Biennial Scientific Meeting of the International Association for the Study of the Liver and the 49th Annual Meeting and Postgraduate Courses of the American Association for the Study of Liver Diseases** Chicago, Illinois, USA November 4-10, 1998 International Association for the Study of the Liver
 . ISSN: 0270-9139.

DT Conference
 LA English
 CC Neoplasms and Neoplastic Agents - Therapeutic Agents; Therapy *24008
 Cytology and Cytochemistry - Human *02508
 Genetics and Cytogenetics - Human *03508
 Metabolism - Proteins, Peptides and Amino Acids *13012
 Digestive System - Pathology *14006
 Neoplasms and Neoplastic Agents - Neoplastic Cell Lines *24005
 Neoplasms and Neoplastic Agents - Biochemistry *24006
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064
 Movement *12100
 Pathology, General and Miscellaneous - Therapy *12512
 Tissue Culture, Apparatus, Methods and Media *32500
 BC Hominidae 86215
 IT Major Concepts
 Tumor Biology
 IT Chemicals & Biochemicals

PR-39 gene: tumor cell actin structure alteration,
tumor cell invasion suppression, tumor cell transfection

IT Miscellaneous Descriptors
Meeting Abstract

ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
 HLF (Hominidae): human hepatoma cell line, in-vitro gene therapy model system

ORGN Organism Superterms
 Animals; Chordates; Humans; Mammals; Primates; Vertebrates

RN 132579-20-5 (ACTIN)
 52622-12-5Q (PR-39)
139637-11-9Q (PR-39)

L49 ANSWER 9 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1998:204187 BIOSIS
 DN PREV199800204187
 TI Suppression of inflammatory liver injury by a proline-arginine-rich peptide, PR-39.
 AU Ross, C. R. (1); Blecha, F.; Basaraba, R.
 CS (1) Dep. Anatomy, Kansas State Univ., Manhattan, KS 66506 USA
 SO FASEB Journal, (March 20, 1998) Vol. 12, No. 5, pp. A1004.
 Meeting Info.: **Annual Meeting of the Professional Research Scientists on Experimental Biology 98, Part II** San Francisco, California, USA April 18-22, 1998 Federation of American Societies for Experimental Biology
 . ISSN: 0892-6638.

DT Conference
 LA English
 CC Digestive System - Pathology *14006
 Pathology, General and Miscellaneous - Inflammation and Inflammatory Disease *12508
 General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
 Biochemical Studies - General *10060

IT Major Concepts
 Dental and Oral System (Ingestion and Assimilation)
 IT Diseases
 inflammatory liver injury: digestive system disease, injury
 IT Chemicals & Biochemicals
 PR-39: proline-arginine-rich peptide
 IT Miscellaneous Descriptors
Meeting Abstract

RN 52622-12-5Q (PR-39)
139637-11-9Q (PR-39)

L49 ANSWER 10 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1998:195926 BIOSIS
 DN PREV199800195926
 TI Proline-rich antimicrobial peptide, PR-39, suppresses invasion and motility of human hepatoma: Dependence on sydecan-1 induction and actin structure alteration.
 AU Otake, T.; Fujimoto, Y.; Ikuta, K.; Tanaka, K.; Saito, H.; Ohhira, M.; Ono, M.; Kohgo, Y.
 CS Third Dep. Intern. Med., Asahikawa Med. Coll., Nishikagura 4-5, Asahikawa Japan
 SO **Proceedings of the American Association for Cancer Research Annual Meeting**, (March, 1998) Vol. 39, pp. 301.
 Meeting Info.: **89th Annual Meeting of the American Association for Cancer Research** New Orleans, Louisiana, USA March 28-April 1, 1998 American Association for Cancer Research
 . ISSN: 0197-016X.

DT Conference
 LA English
 CC Neoplasms and Neoplastic Agents - Pathology; Clinical Aspects; Systemic

Effects *24004
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064

IT Major Concepts
 Tumor Biology

IT Diseases
 hepatoma: digestive system disease, neoplastic disease

IT Chemicals & Biochemicals
 actin: structure alteration; syndecan-1: dependence, induction;
PR-39: proline-rich antimicrobial peptide

IT Miscellaneous Descriptors
Meeting Abstract

RN 147-85-3Q (PROLINE)
 609-36-9Q (PROLINE)
 52622-12-5Q (PR-39)
139637-11-9Q (PR-39)
 132579-20-5 (ACTIN)

L49 ANSWER 11 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1998:21063 BIOSIS
 DN PREV199800021063
 TI **PR-39, a syndecan-inducing peptide secreted during wound repair, binds intracellular SH3 targets.**
 AU Chan, Y. R.; Gallo, R.
 CS Dep. Dermatol., Child. Hosp., Harvard Med. Sch., Boston, MA 02115 USA
 SO Molecular Biology of the Cell, (Nov., 1997) Vol. 8, No. SUPPL., pp. 282A.
 Meeting Info.: **37th Annual Meeting of the American Society for Cell Biology** Washington, D.C., USA December 13-17, 1997 American Society for Cell Biology
 . ISSN: 1059-1524.

DT Conference
 LA English
 CC Cytology and Cytochemistry - Animal *02506
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064
 Enzymes - Physiological Studies *10808
 Anatomy and Histology, General and Comparative - Regeneration and Transplantation *11107
General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals *00520

IT Major Concepts
 Cell Biology

IT Parts, Structures, & Systems of Organisms
 mesenchymal cell

IT Chemicals & Biochemicals
 phospholipase C gamma; syndecan: expression; **PR-39: secretion**

IT Miscellaneous Descriptors
 integrin signaling; wound repair; **Meeting Abstract: Meeting Poster**

RN 52622-12-5Q (PR-39)
139637-11-9Q (PR-39)
 153-87-7Q (INTEGRIN)
 60791-49-3Q (INTEGRIN)
 9001-86-9 (PHOSPHOLIPASE C)

L49 ANSWER 12 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1997:510133 BIOSIS
 DN PREV199799809336
 TI Macrophage-dependent regulation of syndecan gene expression.
 AU Li, Jian; Brown, Lawrence F.; Laham, Roger J.; Volk, Rudiger; **Simons, Michael (1)**
 CS (1) Cardiovasc. Div., RW-453, Beth Israel Deaconess Med. Cent., 330 Brookline Ave., Boston, MA 02215 USA
 SO Circulation Research, (1997) Vol. 81, No. 5, pp. 785-796.
 ISSN: 0009-7330.

DT Article
 LA English
 AB Heparan sulfates in the extracellular matrix are required for a variety of biological processes, including cellular response to heparin-binding growth factors. However, little is known regarding the regulation of their expression and composition under pathophysiological conditions. In the present study, we have investigated the regulation of expression of two key heparan sulfate chain-carrying core proteins, syndecan-1 and syndecan-4, in a mouse/rat infarct model of tissue injury and repair. Induction of myocardial infarction was associated with a prompt increase in expression of both syndecan genes. Although infiltrating macrophages accounted for a substantial increase in syndecan expression, increased expression was noted in the levels of syndecan-1 mRNA in endothelial cells and syndecan-4 mRNA in cardiac myocytes. This increase in expression was limited to the immediate peri-infarct region and was absent from remote areas of the left or right ventricles. The influx of blood-derived macrophages in the heart correlated with the appearance of PR-39 peptide, which has previously been shown to increase syndecan expression in vitro. Studies in the op/op mice strain (which demonstrates sharply reduced levels of circulating monocytes) showed that myocardial infarction was associated with markedly reduced levels of macrophage influx and corresponding reduction in the expression of PR-39 and both syndecan genes. Pretreatment of op/op mice with granulocyte macrophage colony-stimulating factor restored myocardial macrophage content with corresponding restoration of PR-39/syndecan expression. In summary, myocardial infarction is associated with a distinct spatial and temporal pattern of syndecan-1 and -4 gene expression, which is induced by an influx of blood-derived macrophages.

CC Biochemical Studies - General *10060
 Cardiovascular System - General; Methods *14501
 Immunology and Immunochemistry - General; Methods *34502

BC Muridae *86375
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Cardiovascular System (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis)

IT Chemicals & Biochemicals
 HEPARIN SULFATES; PR-39

IT Miscellaneous Descriptors
 ANIMAL MODEL; BIOCHEMISTRY AND BIOPHYSICS; BLOOD AND LYMPHATICS;
 BLOOD-DERIVED; EXPRESSION; GRANULOCYTE MACROPHAGE COLONY-STIMULATION FACTOR; HEART DISEASE; HEPARIN SULFATES; HEPARIN-BINDING GROWTH FACTORS; IMMUNE SYSTEM; MACROPHAGE-DEPENDENT REGULATION; MACROPHAGES; MYOCARDIAL INFARCTION; PR-39 PEPTIDE; SYNDECAN GENE EXPRESSION; SYNDECAN-1; SYNDECAN-4; VASCULAR DISEASE

ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
 mouse (Muridae); rat (Muridae)

ORGN Organism Superterms
 animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates; rodents; vertebrates

RN 9005-49-6D (HEPARIN SULFATES)
 52622-12-5Q (PR-39)
 139637-11-9Q (PR-39)

L49 ANSWER 13 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1997:282147 BIOSIS
 DN PREV199799581350
 TI Prevention of Chlamydia trachomatis infection by antimicrobial peptides.
 AU Burillo, C. A.; Fontenot, J. D.; Phillips, D. M.
 CS Population Council, New York, NY USA
 SO Abstracts of the General Meeting of the American Society for Microbiology, (1997) Vol. 97, No. 0, pp. 100.
 Meeting Info.: 97th General Meeting of the American Society for Microbiology Miami Beach, Florida, USA May 4-8, 1997

ISSN: 1060-2011.

DT Conference; Abstract; Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520

Pathology, General and Miscellaneous - Therapy 12512

Medical and Clinical Microbiology - Bacteriology *36002

Chemotherapy - Antibacterial Agents *38504

BC Chlamydiaceae 07121

Muridae *86375

IT Major Concepts

 Infection; Pharmacology

IT Chemicals & Biochemicals

 PR-39

IT Miscellaneous Descriptors

 ANIMAL MODEL; ANTIBACTERIAL-DRUG; HOST; INFECTION; PATHOGEN; PHARMACOLOGY; PR-39; PROPHENIN-1

ORGN Super Taxa

 Chlamydiaceae: Eubacteria, Bacteria; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

 mouse (Muridae); Chlamydia trachomatis (Chlamydiaceae)

ORGN Organism Superterms

 animals; bacteria; chordates; eubacteria; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; rodents; vertebrates

RN 52622-12-5Q (PR-39)

139637-11-9Q (PR-39)

L49 ANSWER 14 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1997:277909 BIOSIS

DN PREV199799577112

TI PR 39, a endogenous antimicrobial peptide, accelerated healing of acetic acid-induced gastric ulcers in rats.

AU Onodera, S.; Okumura, T.; Ono, M.; Takahashi, N.; Kohgo, Y.

CS Third Dep. Internal Med., Asahikawa Med. Coll., Asahikawa 078 Japan

SO Gastroenterology, (1997) Vol. 112, No. 4 SUPPL., pp. A246.

Meeting Info.: **Digestive Disease Week and the 97th Annual Meeting of the American Gastroenterological Association** Washington, D.C., USA

May 11-14, 1997

ISSN: 0016-5085.

DT Conference; Abstract

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520

Biochemical Studies - Proteins, Peptides and Amino Acids 10064

Anatomy and Histology, General and Comparative - Regeneration and Transplantation *11107

Digestive System - Pathology *14006

BC Muridae *86375

IT Major Concepts

 Digestive System (Ingestion and Assimilation); Physiology

IT Chemicals & Biochemicals

 PR 39; ACETIC ACID

IT Miscellaneous Descriptors

 ACCELERATED HEALING; ACETIC ACID-INDUCED GASTRIC ULCERS; ANIMAL MODEL; BIOCHEMISTRY AND BIOPHYSICS; DIGESTIVE SYSTEM; DIGESTIVE SYSTEM DISEASE; ENDOGENOUS ANTIMICROBIAL PEPTIDE; PR 39

ORGN Super Taxa

 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

 rat (Muridae)

ORGN Organism Superterms

 animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates; rodents; vertebrates

RN 52622-12-5Q (PR 39)

139637-11-9Q (PR 39)

64-19-7 (ACETIC ACID)

L49 ANSWER 15 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1997:233874 BIOSIS
 DN PREV199799533077
 TI **PR-39**, a proline-rich antimicrobial peptide, confers invasive phenotype and actin structure on human hepatoma cells.
 AU Otake, T.; Fujimoto, Y.; Matsumoto, A.; Ohhira, M.; Ono, M.; Kohgo, Y.
 CS 3rd Dep. Intern. Med., Asahikawa Med. Coll., Nishikagura 4-5, Asahikawa 078 Japan
 SO **Proceedings of the American Association for Cancer Research Annual Meeting**, (1997) Vol. 38, No. 0, pp. 548.
 Meeting Info.: **Eighty-eighth Annual Meeting of the American Association for Cancer Research** San Diego, California, USA April 12-16, 1997
 ISSN: 0197-016X.
 DT Conference; Abstract
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
 Cytology and Cytochemistry - Human *02508
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064
 Biophysics - Molecular Properties and Macromolecules *10506
 Digestive System - Pathology *14006
 Neoplasms and Neoplastic Agents - Pathology; Clinical Aspects; Systemic Effects *24004
 Neoplasms and Neoplastic Agents - Biochemistry *24006
 BC Hominidae *86215
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Cell Biology; Gastroenterology (Human Medicine, Medical Sciences); Oncology (Human Medicine, Medical Sciences)
 IT Chemicals & Biochemicals
 PR-39; PROLINE; ACTIN
 IT Miscellaneous Descriptors
 BIOCHEMISTRY AND BIOPHYSICS; CELL BIOLOGY; HLF CELL LINE; HUMAN HEPATOMA CELLS; INVASIVE PHENOTYPE; PR-39; PROLINE-RICH ANTIMICROBIAL PEPTIDE; SYNDÉCAN-1; TUMOR BIOLOGY
 ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 Hominidae (Hominidae)
 ORGN Organism Superterms
 animals; chordates; humans; mammals; primates; vertebrates
 RN 52622-12-5Q (PR-39)
 139637-11-9Q (PR-39)
 147-85-3 (PROLINE)
 132579-20-5 (ACTIN)

L49 ANSWER 16 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1997:185663 BIOSIS
 DN PREV199799484866
 TI NADPH oxidase inhibition blocks postischemic leukocyte adhesion.
 AU Ross, C. R. (1); Blecha, F.; Korthuis, R. J.
 CS (1) Dep. Anatomy Physiol., Kansas State Univ., Manhattan, KS USA
 SO FASEB Journal, (1997) Vol. 11, No. 3, pp. A340.
 Meeting Info.: **Annual Meeting of the Professional Research Scientists on Experimental Biology 97** New Orleans, Louisiana, USA April 6-9, 1997
 ISSN: 0892-6638.
 DT Conference; Abstract
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
 Cytology and Cytochemistry - Animal *02506
 Biochemistry - Gases *10012

Enzymes - Physiological Studies *10808
 Cardiovascular System - Blood Vessel Pathology *14508
 Blood, Blood-Forming Organs and Body Fluids - Blood Cell Studies *15004
 Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and
 Reticuloendothelial System *15008
 BC Muridae *86375
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
 and Circulation); Cardiovascular System (Transport and Circulation);
 Cell Biology; Enzymology (Biochemistry and Molecular Biophysics)
 IT Chemicals & Biochemicals
 NADPH OXIDASE; PR-39; OXYGEN
 IT Miscellaneous Descriptors
 ADHESION; BLOOD AND LYMPHATICS; CARDIOVASCULAR SYSTEM; CIRCULATORY
 SYSTEM; DIGESTIVE SYSTEM; EMIGRATION; ENZYME INHIBITOR; EXTRAVASATION;
 ISCHEMIA-REPERFUSION INJURY; LEUKOCYTE; MESENTERIC VEIN; NADPH OXIDASE;
 NEUTROPHIL; PR-39; PRODUCTION; REACTIVE OXYGEN
 SPECIES
 ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 rat (Muridae)
 ORGN Organism Superterms
 animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates;
 rodents; vertebrates
 RN 9032-22-8Q (NADPH OXIDASE)
 37256-37-4Q (NADPH OXIDASE)
 52622-12-5Q (PR-39)
139637-11-9Q (PR-39)
 7782-44-7 (OXYGEN)

 L49 ANSWER 17 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1997:101590 BIOSIS
 DN PREV199799400793
 TI PR-39, a proline-rich peptide antibiotic from pig, and
 FALL-39, a tentative human counterpart.
 AU Agerberth, Birgitta (1); Gunne, Hans; Odeberg, Jacob; Kogner, Per; Boman,
 Hans G.; Gudmundsson, Gudmundur H.
 CS (1) Dep. Microbiol., Stockholm Univ., S-10691 Stockholm Sweden
 SO Veterinary Immunology and Immunopathology, (1996) Vol. 54, No. 1-4, pp.
 127-131.
 Meeting Info.: **Fourth International Veterinary Immunology**
 Symposium Davis, California, USA July 1995
 ISSN: 0165-2427.
 DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of
 Conferences, Congresses, Review Annuals 00520
 Metabolism - Proteins, Peptides and Amino Acids *13012
 Medical and Clinical Microbiology - Bacteriology *36002
 Chemotherapy - Antibacterial Agents *38504
 Pharmacognosy and Pharmaceutical Botany *54000
 BC Enterobacteriaceae 06702
 Endospore-forming Gram-Positives 07810
 Suidae 85740
 Hominidae *86215
 IT Major Concepts
 Infection; Metabolism; Pharmacognosy (Pharmacology); Pharmacology
 IT Chemicals & Biochemicals
 PR-39; PROLINE
 IT Miscellaneous Descriptors
 ANTIBACTERIAL-DRUG; CATHELIN PROPART; CHROMOSOME MAPPING; FALL-39;
 GENOMIC CLONING; MISCELLANEOUS METHOD; PHARMACOGNOSY; PR-
 39; PROLINE-RICH PEPTIDE
 ORGN Super Taxa
 Endospore-forming Gram-Positives: Eubacteria, Bacteria;

Enterobacteriaceae: Eubacteria, Bacteria; Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Suidae: Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

endospore-forming gram-positive rods and cocci (Endospore-forming Gram-Positives); human (Hominidae); pig (Suidae); *Bacillus megaterium* (Endospore-forming Gram-Positives); *Escherichia coli* (Enterobacteriaceae)

ORGN Organism Superterms

animals; artiodactyls; bacteria; chordates; eubacteria; humans; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; primates; vertebrates

RN 52622-12-5Q (PR-39)
139637-11-9Q (PR-39)
147-85-3 (PROLINE)

L49 ANSWER 18 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1996:327386 BIOSIS

DN PREV199699049742

TI PR-39, a proline-rich antibacterial peptide that inhibits phagocyte NADPH oxidase activity by binding to Src homology 3 domains of p47-phox.

AU Shi, Jishu; Ross, Christopher R.; Leto, Thomas L.; Blecha, Frank (1)

CS (1) Dep. Anat. Physiol., Coll. Vet. Med., Kans. State Univ., Manhattan, KS 66506-5602 USA

SO **Proceedings of the National Academy of Sciences of the United States of America**, (1996) Vol. 93, No. 12, pp. 6014-6018.

ISSN: 0027-8424.

DT Article

LA English

AB Reactive oxygen intermediates generated by the phagocyte NADPH oxidase are critically important components of host defense. However, these highly toxic oxidants can cause significant tissue injury during inflammation; thus, it is essential that their generation and inactivation are tightly regulated. We show here that an endogenous proline-arginine (PR)-rich antibacterial peptide, PR-39, inhibits NADPH oxidase activity by blocking assembly of this enzyme through interactions with Src homology 3 domains of a cytosolic component. This neutrophil-derived peptide inhibited oxygen-dependent microbicidal activity of neutrophils in whole cells and in a cell-free assay of NADPH oxidase. Both oxidase inhibitory and direct antimicrobial activities were defined within the amino-terminal 26 residues of PR-39. Oxidase inhibition was attributed to binding of PR-39 to the p47-phox cytosolic oxidase component. Its effects involve both a polybasic amino-terminal segment and a proline-rich core region of PR-39 that binds to the P47-phox Src homology 3 domains and, thereby, inhibits interaction with the small subunit of cytochrome b-558, p22-phox. These findings suggest that PR-39, which has been shown to be involved in tissue repair processes, is a multifunctional peptide that can regulate NADPH oxidase production of superoxide anion (O₂·-), thus limiting excessive tissue damage during inflammation.

CC Cytology and Cytochemistry - Animal *02506

Biochemical Studies - General *10060

Biochemical Studies - Proteins, Peptides and Amino Acids *10064

Biochemical Studies - Porphyrins and Bile Pigments *10065

Biophysics - Molecular Properties and Macromolecules *10506

Enzymes - Chemical and Physical *10806

Pathology, General and Miscellaneous - Inflammation and Inflammatory Disease *12508

Metabolism - General Metabolism; Metabolic Pathways *13002

Blood, Blood-Forming Organs and Body Fluids - Blood Cell Studies *15004

Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and Reticuloendothelial System *15008

Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504

Immunology and Immunochemistry - Immunopathology, Tissue Immunology

*34508
 BC Suidae *85740
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Cell Biology; Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis); Metabolism; Pathology
 IT Chemicals & Biochemicals
 PR-39; PROLINE; NADPH OXIDASE; SUPEROXIDE
 IT Miscellaneous Descriptors
 CYTOCHROME B-558; HOST DEFENSE; INFLAMMATION; POLY-BASIC AMINO-TERMINAL SEGMENT; PROLINE-RICH CORE REGION; PROTEIN-PROTEIN INTERACTION; P22-PHOX; SUPEROXIDE ANION
 ORGN Super Taxa
 Suidae: Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 porcine (Suidae)
 ORGN Organism Superterms
 animals; artiodactyls; chordates; mammals; nonhuman mammals; nonhuman vertebrates; vertebrates
 RN 52622-12-5Q (PR-39)
 139637-11-9Q (PR-39)
 147-85-3 (PROLINE)
 9032-22-8Q (NADPH OXIDASE)
 37256-37-4Q (NADPH OXIDASE)
 11062-77-4 (SUPEROXIDE)
 L49 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1996:305538 BIOSIS
 DN PREV199699027894
 TI PR-39: A proline-rich antimicrobial peptide from neutrophils that inhibits NADPH oxidase by binding to a SH3 domain of P47PHOX.
 AU Leto, T. L. (1); Shi, J.; Ross, C. R.; Blecha, F.
 CS (1) NIAID, NIH, Bethesda, MD 20892 USA
 SO Journal of Investigative Medicine, (1996) Vol. 44, No. 3, pp. 268A.
 Meeting Info.: Annual Meeting of the Association of American Physicians, the American Society for Clinical Investigation, and the American Federation for Clinical Research: Biomedicine '96, Medical Research from Bench to Bedside Washington, D.C., USA May 3-6, 1996
 ISSN: 1081-5589.
 DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520
 Cytology and Cytochemistry - Human *02508
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Biophysics - Membrane Phenomena *10508
 Enzymes - Physiological Studies *10808
 Pathology, General and Miscellaneous - Inflammation and Inflammatory Disease *12508
 Metabolism - Energy and Respiratory Metabolism *13003
 Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and Reticuloendothelial System *15008
 Physiology and Biochemistry of Bacteria *31000
 Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
 BC 00500
 Hominidae *86215
 IT Major Concepts
 Blood and Lymphatics (Transport and Circulation); Cell Biology; Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis); Membranes (Cell Biology); Metabolism; Pathology; Physiology
 IT Chemicals & Biochemicals
 PR-39; PROLINE; NADPH OXIDASE
 IT Miscellaneous Descriptors

IMMUNE RESPONSE; INFLAMMATION; MEETING ABSTRACT;
OXIDATION

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

human (Hominidae); organisms (Organisms - Unspecified)

ORGN Organism Superterms

animals; chordates; humans; mammals; primates; vertebrates

RN 52622-12-5Q (PR-39)

139637-11-9Q (PR-39)

147-85-3 (PROLINE)

9032-22-8Q (NADPH OXIDASE)

37256-37-4Q (NADPH OXIDASE)

L49 ANSWER 20 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1996:52791 BIOSIS

DN PREV199698624926

TI PR-39, an antimicrobial peptide, induces syndecans, binds a receptor and increases cAMP in mesenchymal cells.

AU Gallo, R. L.; Povsic, T. J.; Bemfield, M.

CS Children's Hosp., Harvard Med. Sch., Boston, MA 02115 USA

SO Molecular Biology of the Cell, (1995) Vol. 6, No. SUPPL., pp. 162A.

Meeting Info.: **Thirty-fifth Annual Meeting of the American Society for Cell Biology** Washington, D.C., USA December 9-13, 1995

ISSN: 1059-1524.

DT Conference

LA English

CC General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520

Cytology and Cytochemistry - Animal *02506

Biochemical Studies - Nucleic Acids, Purines and Pyrimidines *10062

Biochemical Studies - Proteins, Peptides and Amino Acids *10064

Biochemical Studies - Carbohydrates *10068

Biophysics - Membrane Phenomena *10508

BC Muridae *86375

IT Major Concepts

Biochemistry and Molecular Biophysics; Cell Biology; Membranes (Cell Biology)

IT Chemicals & Biochemicals

PR-39; CYCLIC AMP; HEPARAN SULFATE

IT Miscellaneous Descriptors

CYCLIC AMP; HEPARAN SULFATE; INTEGRAL MEMBRANE PROTEOGLYCAN;

MEETING ABSTRACT; MEETING POSTER;

MOUSE NIH-3T3 CELL; SECOND MESSENGER; SIGNAL TRANSDUCTION; WOUND REPAIR

ORGN Super Taxa

Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

Muridae (Muridae)

ORGN Organism Superterms

animals; chordates; mammals; nonhuman vertebrates; nonhuman mammals; rodents; vertebrates

RN 52622-12-5Q (PR-39)

139637-11-9Q (PR-39)

60-92-4 (CYCLIC AMP)

9050-30-0 (HEPARAN SULFATE)

L49 ANSWER 21 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1995:525790 BIOSIS

DN PREV199598540090

TI Characterization of the antibacterial activity of PR-39 and its functional domain, PR-26.

AU Shi, Jishu (1); Blecha, Frank

CS (1) Kans. State Univ., Manhattan, KS 66506 USA

SO Abstracts of the Interscience Conference on Antimicrobial Agents and Chemotherapy, (1995) Vol. 35, No. 0, pp. 133.

Meeting Info.: 35th Interscience Conference on Antimicrobial Agents

DT and **Chemotherapy** San Francisco, California, USA September 17-20, 1995

LA Conference

LA English

CC Pathology, General and Miscellaneous - Comparative *12503

Pathology, General and Miscellaneous - Therapy *12512

Digestive System - Pathology *14006

Pharmacology - Clinical Pharmacology *22005

Pharmacology - Digestive System *22014

Laboratory Animals - General *28002

Medical and Clinical Microbiology - Bacteriology *36002

Veterinary Science - Microbiology *38006

Chemotherapy - Antibacterial Agents *38504

BC Enterobacteriaceae 06702

Suidae 85740

Hominidae 86215

Muridae *86375

IT Major Concepts

Animal Care; Gastroenterology (Human Medicine, Medical Sciences);
Infection; Pathology; Pharmacology; Veterinary Medicine (Medical Sciences)

IT Chemicals & Biochemicals

PR-39

IT Miscellaneous Descriptors

ANTIBACTERIAL-DRUG; HUMAN RELEVANCE; INTESTINE; MEETING
ABSTRACT; MEETING POSTER

ORGN Super Taxa

Enterobacteriaceae: Eubacteria, Bacteria; Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia; Suidae: Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

porcine (Suidae); rat (Muridae); Escherichia coli (Enterobacteriaceae); Hominidae (Hominidae); Salmonella choleraesuis (Enterobacteriaceae); Salmonella typhimurium (Enterobacteriaceae)

ORGN Organism Superterms

animals; artiodactyls; bacteria; chordates; eubacteria; humans; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; primates; rodents; vertebrates

RN 52622-12-5Q (**PR-39**)

139637-11-9Q (PR-39)

L49 ANSWER 22 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1995:408422 BIOSIS

DN PREV199598422722

TI Structure of the gene for porcine peptide antibiotic **PR-39**, a cathelin gene family member: Comparative mapping of the locus for the human peptide antibiotic FALL-39.

AU Gudmundsson, Gudmundur H. (1); Magnusson, Kristinn P.; Chowdhary, Bhanu P.; Johansson, Maria; Andersson, Leif; Boman, Hans G.

CS (1) Dep. Microbiol., Stockholm Univ., S-106 91 Stockholm Sweden

SO **Proceedings of the National Academy of Sciences of the United States of America**, (1995) Vol. 92, No. 15, pp. 7085-7089.

ISSN: 0027-8424.

DT Article

LA English

AB **PR-39** is a porcine 39-aa peptide antibiotic composed of 49% proline and 24% arginine, with an activity against Gram-negative bacteria comparable to that of tetracycline. In *Escherichia coli*, it inhibits DNA and protein synthesis. **PR-39** was originally isolated from pig small intestine, but subsequent cDNA cloning showed that the gene is expressed in the bone marrow. The open reading frame of the clone showed that **PR-39** is made as 173-aa precursor whose proregion belongs to the cathelin family. The **PR39** gene, which is rather compact and spans only 1784 bp has now been sequenced. The coding information is split into four exons. The first exon contains the signal sequence of 29 residues and the first 37 residues of

Metabolism - Proteins, Peptides and Amino Acids *13012
 Metabolism - Nucleic Acids, Purines and Pyrimidines *13014
 Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and
 Reticuloendothelial System *15008
 Integumentary System - Physiology and Biochemistry *18504
 Developmental Biology - Embryology - General and Descriptive *25502
 Developmental Biology - Embryology - Morphogenesis, General *25508
 BC Muridae *86375
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
 and Circulation); Cell Biology; Development; Integumentary System
 (Chemical Coordination and Homeostasis); Metabolism; Physiology
 IT Miscellaneous Descriptors
 ENDOTHELIAL CELL; FIBROBLAST; HEPARAN SULFATE PROTEOGLYCAN;
 MEETING ABSTRACT; MESSENGER RNA; MOUSE EMBRYO;
 NEUTROPHIL DEVELOPMENT; PR-39 ANTIBACTERIAL PEPTIDE
 ORGN Super Taxa
 Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 Muridae (Muridae)
 ORGN Organism Superterms
 animals; chordates; mammals; nonhuman vertebrates; nonhuman mammals;
 rodents; vertebrates

L49 ANSWER 24 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1995:194795 BIOSIS
 DN PREV199598209095
 TI Antibacterial activity of synthetic peptides derived from PR-
 39, a proline-arginine-rich peptide from porcine neutrophils.
 AU Shi, J.; Ross, C. R.; Sylte, M. J.; McVey, D. S.; Blecha, F.
 CS Kansas State Univ., Manhattan, KS 66506 USA
 SO FASEB Journal, (1995) Vol. 9, No. 3, pp. A522.
 Meeting Info.: Experimental Biology 95, Part I Atlanta, Georgia, USA April
 9-13, 1995
 ISSN: 0892-6638.
 DT Conference
 LA English
 CC General Biology - Symposia, Transactions and Proceedings of
 Conferences, Congresses, Review Annuals 00520
 Cytology and Cytochemistry - Animal 02506
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Blood, Blood-Forming Organs and Body Fluids - Blood Cell Studies *15004
 Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and
 Reticuloendothelial System *15008
 Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
 Immunology and Immunochemistry - Immunopathology, Tissue Immunology
 *34508
 Medical and Clinical Microbiology - Bacteriology *36002
 Chemotherapy - Antibacterial Agents *38504
 BC Enterobacteriaceae 06702
 Suidae *85740
 IT Major Concepts
 Blood and Lymphatics (Transport and Circulation); Immune System
 (Chemical Coordination and Homeostasis); Infection; Pharmacology
 IT Chemicals & Biochemicals
 PR-39; TETRACYCLINE
 IT Miscellaneous Descriptors
 ANTIBACTERIAL-DRUG; ANTIBIOTICS; IMMUNE RESPONSE; MEETING
 ABSTRACT; TETRACYCLINE
 ORGN Super Taxa
 Enterobacteriaceae: Eubacteria, Bacteria; Suidae: Artiodactyla,
 Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 Salmonella choleraesuis (Enterobacteriaceae); Salmonella typhimurium
 (Enterobacteriaceae); Suidae (Suidae)
 ORGN Organism Superterms

animals; artiodactyls; bacteria; chordates; eubacteria; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; vertebrates

RN 52622-12-5Q (PR-39)
 139637-11-9Q (PR-39)
 60-54-8 (TETRACYCLINE)

L49 ANSWER 25 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1995:107699 BIOSIS
 DN PREV199598121999
 TI FALL-39, a putative human peptide antibiotic, is cysteine-free and expressed in bone marrow and testis.
 AU Agerberth, Birgitta (1); Gunne, Hans (1); Odeberg, Jakob; Kogner, Per;
 Boman, Hans G. (1); Gudmundsson, Gudmundur H. (1)
 CS (1) Dep. Microbiol., Stockholm Univ., S-10691 Stockholm Sweden
 SO **Proceedings of the National Academy of Sciences of the United States of America**, (1995) Vol. 92, No. 1, pp. 195-199.
 ISSN: 0027-8424.
 DT Article
 LA English
 AB PR-39, a proline/arginine-rich peptide antibiotic, has been purified from pig intestine and later shown to originate in the bone marrow. Intending to isolate a clone for a human counterpart to PR-39, we synthesized a PCR probe derived from the PR-39 gene. However, when this probe was used to screen a human bone marrow cDNA library, eight clones were obtained with information for another putative human peptide antibiotic, designated FALL-39 after the first four residues. FALL-39 is a 39-residue peptide lacking cysteine and tryptophan. All human peptide antibiotics previously isolated (or predicted) belong to the defensin family and contain three disulfide bridges. The clone for prepro-FALL-39 encodes a cathelin-like precursor protein with 170 amino acid residues. We have postulated a dibasic processing site for the mature FALL-39 and chemically synthesized the putative peptide. In basal medium E, synthetic FALL-39 was highly active against *Escherichia coli* and *Bacillus megaterium*. Residues 13-34 in FALL-39 can be predicted to form a perfect amphiphatic helix, and CD spectra showed that medium E induced 30% helix formation in FALL-39. RNA blot analyses disclosed that the gene for FALL-39 is expressed mainly in human bone marrow and testis.
 CC Genetics and Cytogenetics - Human *03508
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Metabolism - Proteins, Peptides and Amino Acids *13012
 Blood, Blood-Forming Organs and Body Fluids - Lymphatic Tissue and Reticuloendothelial System *15008
 Reproductive System - Physiology and Biochemistry *16504
 BC Enterobacteriaceae 06702
 Endospore-forming Gram-Positives 07810
 Hominidae *86215
 IT Major Concepts
 Blood and Lymphatics (Transport and Circulation); Genetics; Metabolism; Reproductive System (Reproduction)
 IT Chemicals & Biochemicals
 CYSTEINE
 IT Miscellaneous Descriptors
 GENE EXPRESSION
 ORGN Super Taxa
 Endospore-forming Gram-Positives: Eubacteria, Bacteria;
 Enterobacteriaceae: Eubacteria, Bacteria; Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 endospore-forming gram-positive rods and cocci (Endospore-forming Gram-Positives); *Bacillus megaterium* (Endospore-forming Gram-Positives); *Escherichia coli* (Enterobacteriaceae); Hominidae (Hominidae)
 ORGN Organism Superterms
 animals; bacteria; chordates; eubacteria; humans; mammals; microorganisms; primates; vertebrates

RN 52-90-4 (CYSTEINE)

L49 ANSWER 26 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS
 AN 1995:31838 BIOSIS
 DN PREV199598046138
 TI Syndecans, cell surface heparan sulfate proteoglycans, are induced by a proline-rich antimicrobial peptide from wounds.
 AU Gallo, Richard L. (1); Ono, Minoru; Povsic, Thomas; Page, Curtis; Eriksson, Elof; Klagsburn, Michael; Bernfield, Merton
 CS (1) Joint Program Neonatol., Harvard Med. Sch., 300 Longwood Ave., Boston, MA 02115 USA
 SO **Proceedings of the National Academy of Sciences of the United States of America**, (1994) Vol. 91, No. 23, pp. 11035-11039.
 ISSN: 0027-8424.
 DT Article
 LA English
 AB Cell surface heparan sulfate proteoglycans, such as the syndecans, are required for cellular responses to heparin-binding growth factors and extracellular matrix components. Expression of syndecan-1 and -4 is induced in mesenchymal cells during wound repair in the mouse, consistent with a role for syndecans in regulating cell proliferation and migration in response to these effectors. Here we show that wound fluid contains inductive activity that mimics the *in vivo* induction in time of appearance, specificity for mesenchymal cells, and selectivity for syndecan-1 and -4. We have purified and synthesized a 4.8-kDa proline-rich protein from wound fluid that reproduces this induction of syndecan-1 and -4 in cultured cells. This peptide, identical to the antibacterial peptide PR-39, is released into the wound by the cellular infiltrate and induces syndecan expression at the same peptide concentrations that lyse bacteria. These results indicate that wounds contain a multifunctional protein that induces mammalian cells to express cell surface heparan sulfate proteoglycans as part of the wound repair process and that kills bacteria as part of a nonimmune defense mechanism.
 CC Cytology and Cytochemistry - Animal *02506
 Biochemical Studies - Proteins, Peptides and Amino Acids *10064
 Biophysics - Membrane Phenomena *10508
 Metabolism - Carbohydrates 13004
 Metabolism - Minerals 13010
 Metabolism - Proteins, Peptides and Amino Acids 13012
 Endocrine System - General *17002
 Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
 Medical and Clinical Microbiology - Bacteriology *36002
 BC Bacteria - General Unspecified 05000
 Muridae *86375
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Cell Biology; Endocrine System (Chemical Coordination and Homeostasis); Immune System (Chemical Coordination and Homeostasis); Infection; Membranes (Cell Biology)
 IT Chemicals & Biochemicals
 HEPARAN SULFATE; PROLINE
 IT Miscellaneous Descriptors
 ANTI-BACTERIAL DEFENSE; GROWTH FACTOR RESPONSE; PEPTIDE-39
 ORGN Super Taxa
 Bacteria - General Unspecified: Eubacteria, Bacteria; Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 bacteria (Bacteria - General Unspecified); mouse (Muridae)
 ORGN Organism Superterms
 animals; bacteria; chordates; eubacteria; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; rodents; vertebrates
 RN 9050-30-0 (HEPARAN SULFATE)
 147-85-3 (PROLINE)

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(FILE 'HOME' ENTERED AT 11:39:29 ON 12 DEC 2000)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 11:39:39 ON 12 DEC 2000
 E SIMONS M/AU

L1 220 S E3-E8,E24-E26
 E GOLD Y/AU
 L2 68 S PR39 OR PR 39
 L3 5 S L1 AND L2
 E GAO Y/AU
 L4 633 S E3-E19
 E GAO YOU/AU
 L5 16 S E3,E10
 L6 4 S L2 AND L5
 L7 5 S L3,L6

FILE 'REGISTRY' ENTERED AT 11:41:30 ON 12 DEC 2000
 L8 1 S 139637-11-9

FILE 'HCAPLUS' ENTERED AT 11:41:38 ON 12 DEC 2000
 L9 26 S L8
 L10 3 S L1,L4 AND L9
 L11 5 S L7,L10

FILE 'REGISTRY' ENTERED AT 11:42:06 ON 12 DEC 2000
 E RRRPRPPYLPRPRPP/SQEP
 L12 1 S E3
 E RRRPRPPYLPR/SQEP
 L13 1 S E3
 E RRRPRPPY/SQEP
 L14 1 S E3

FILE 'HCAPLUS' ENTERED AT 11:42:56 ON 12 DEC 2000
 L15 1 S L12-L14
 L16 1 S L1,L4 AND L15
 L17 5 S L11,L16
 L18 63 S L2,L9 NOT L17
 L19 41 S L18 AND ?PEPTIDE?
 L20 0 S L18 AND PROTEASOM?

FILE 'REGISTRY' ENTERED AT 11:44:35 ON 12 DEC 2000
 L21 1 S 140879-24-9

FILE 'HCAPLUS' ENTERED AT 11:44:41 ON 12 DEC 2000
 L22 2170 S L21
 L23 0 S L18 AND L22
 L24 4 S L17 AND (L22 OR PROTEASOM?)
 L25 5 S L17,L24
 L26 2 S L18 AND CYTOPLAS?
 L27 60 S L18 AND (PD<=19990326 OR PRD<=19990326 OR PRD.B<=19990326 OR
 L28 1 S L27 AND ANGIOGEN?
 L29 0 S L27 AND HIF
 L30 0 S L27 AND HIF1
 L31 0 S L27 AND HIF1ALPHA
 L32 0 S L27 AND I KAPPA B ALPHA
 L33 0 S L27 AND HIF 1 ALPHA
 L34 0 S L27 AND HIF I ALPHA
 L35 12 S L27 AND (1 OR 63)/SC,SX

FILE 'REGISTRY' ENTERED AT 11:50:16 ON 12 DEC 2000

FILE 'HCAPLUS' ENTERED AT 11:50:53 ON 12 DEC 2000

FILE 'BIOSIS' ENTERED AT 11:51:40 ON 12 DEC 2000
 E SIMONS M/AU

L36 409 S E3-E15,E27-E32
E GAO Y/AU
L37 477 S E3-E22
E GAO YOU/AU
L38 8 S E6
L39 59 S L2 OR L8 OR L12-L14
L40 6 S L36-L38 AND L39
L41 4 S L40 AND PY<=1999
L42 20 S L39 AND 00520/CC
L43 27 S L39 AND (CONFERENCE OR CONGRESS OR POSTER OR SYMPOS? OR MEETI
L44 27 S L42,L43
L45 6 S L44 NOT CONFERENCE/DT
L46 4 S L45 NOT (PREV199800492186 OR PREV199800349846)/DN
L47 2 S L45 NOT L46
L48 25 S L44 NOT L47
L49 26 S L41,L48

FILE 'BIOSIS' ENTERED AT 11:55:41 ON 12 DEC 2000